

	<b>ACCREDITATION DOCUMENT</b>	<b>F-06/02 Issue Date: 18/08/2020 Rev. No: 09 LAB 082</b>
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**Accreditation No: LAB 082**

**Awarded to**

**SGS Pakistan (Private) Limited  
Oil, Gas & Chemicals Testing Lab  
H-3/3, Sector 5, Korangi Industrial Area, Karachi 74900  
Karachi, Pakistan**

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **14-05-2015** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2017**.

The accreditation requires regular surveillance and is valid until **25-11-2026**.

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed measurements/tests.

**PAKISTAN NATIONAL ACCREDITATION COUNCIL**

22/05/2024  
Date

SD  
Director General

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### Testing Laboratory.

Accreditation Scope of Oil, Gas and Chemicals Testing Lab. Karachi, Pakistan.

Permanent laboratory premises

Materials/Products tested	Testing field (e.g. environmental testing or mechanical testing)	Types of test/ Properties measured	Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference
Ethanol	Oil, Gas & Chemicals	Esters as Ethyl Acetate	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Aldehyde as Acetaldehyde	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	*Total Higher Alcohols	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Methanol	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Furfural	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Benzene	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Crotonaldehyde	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	ISO-Propanol (IPA)	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	N Propanol	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Iso-Butanol	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	N-Butanol	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Iso-Amyl Alcohol	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	N-Amyl Alcohol	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Sec Butanol	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Tert Butanol	OGC/SGS ETOH 0001-10

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Ethanol	Oil, Gas & Chemicals	Acetal	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Cyclohexane	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Acetone	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	2 methyl-1-butanol	OGC/SGS ETOH 0001-10
Ethanol	Oil, Gas & Chemicals	Volatile impurity in ethanol by GC include Methanol, aldehydes, other alcohols, aromatics, glycols & miscellaneous)	OGC TG ETOH-02 (2017)
Ethanol	Oil, Gas & Chemicals	Strength by volume at 20°C	OIML
Ethanol	Oil, Gas & Chemicals	Acidity as Acetic Acid	ASTM D-1613- 06(2012)
Ethanol	Oil, Gas & Chemicals	Water Content	ASTM E-203-16
Ethanol	Oil, Gas & Chemicals	Permanganate Time Test	ASTM D-1363- 19
Ethanol	Oil, Gas & Chemicals	Curve	UV-SGS-CORP-13.001
Ethanol	Oil, Gas & Chemicals	Copper as Cu	ASTM D1688-17
Ethanol	Oil, Gas & Chemicals	Total Sulphur	ASTM D-5453-19
Ethanol	Oil, Gas & Chemicals	Lead as Pb	ASTM D3559-15
Ethanol	Oil, Gas & Chemicals	Color	ASTM D-1209 -19
Ethanol	Oil, Gas & Chemicals	pH	ASTM D-6423-19
Ethanol	Oil, Gas & Chemicals	Density	ASTM D-4052-18
Ethanol	Oil, Gas & Chemicals	Dry Matter	ASTM D-1353-13
Ethanol	Oil, Gas & Chemicals	Absorbance @ 270nm	UV-SGS-CORP-13.001
Ethanol	Oil, Gas & Chemicals	Absorbance @ 240nm	UV-SGS-CORP-13.001

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Ethanol	Oil, Gas & Chemicals	Absorbance @ 230nm	UV-SGS-CORP-13.001
Ethanol	Oil, Gas & Chemicals	Absorbance @ 220nm	UV-SGS-CORP-13.001
Gas Oil	Oil, Gas & Chemicals	Acid number	ASTM D664-18
Gas Oil	Oil, Gas & Chemicals	Ash content	ASTM D482-19
Gas Oil	Oil, Gas & Chemicals	Cetane Index	ASTM D976-16
Gas Oil	Oil, Gas & Chemicals	CFPP	ASTM D6371-17
Gas Oil	Oil, Gas & Chemicals	Cloud Point	ASTM D2500-17
Gas Oil	Oil, Gas & Chemicals	Color ASTM	ASTM D1500-17
Gas Oil	Oil, Gas & Chemicals	Conradson Carbon Residue on 10% distillation residue	ASTM D189- 19
Gas Oil	Oil, Gas & Chemicals	Copper corrosion 3hrs@50 °C	ASTM D130-19
Gas Oil	Oil, Gas & Chemicals	Density @ 15°C	ASTM D4052-18
Gas Oil	Oil, Gas & Chemicals	IBP	ASTM D86-20
Gas Oil	Oil, Gas & Chemicals	10 % Recovery	ASTM D86-20
Gas Oil	Oil, Gas & Chemicals	50 % Recovery	ASTM D86-20
Gas Oil	Oil, Gas & Chemicals	90 % Recovery	ASTM D86-20
Gas Oil	Oil, Gas & Chemicals	95 % Recovery	ASTM D86-20
Gas Oil	Oil, Gas & Chemicals	FBP	ASTM D86-20
Gas Oil	Oil, Gas & Chemicals	Flash Point PMcc	ASTM D93-20
Gas Oil	Oil, Gas & Chemicals	Kinematic viscosity at 40 °C	ASTM D445-19
Gas Oil	Oil, Gas & Chemicals	Viscosity Stabinger at 40 °C	ASTM D7042-20

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Gas Oil	Oil, Gas & Chemicals	Nitrogen	ASTM D 4629-17
Gas Oil	Oil, Gas & Chemicals	Pour Point	ASTM D 97-17
Gas Oil	Oil, Gas & Chemicals	Sulphur content	ASTM D 5453-19
Gas Oil	Oil, Gas & Chemicals	Water content	ASTM D 6304-16
Gas Oil	Oil, Gas & Chemicals	Aromatics	ASTM D1319-20
Gas Oil	Oil, Gas & Chemicals	FAME content	EN 14078-14
Gas Oil	Oil, Gas & Chemicals	Water and sediment	ASTM D1796-16
Fuel Oil	Oil, Gas & Chemicals	Acid Number	ASTM D664-18
Fuel Oil	Oil, Gas & Chemicals	API Gravity	ASTM D1298-17
Fuel Oil	Oil, Gas & Chemicals	Ash Content	ASTM D482-19
Fuel Oil	Oil, Gas & Chemicals	Conradson Carbon Residue	ASTM D189-19
Fuel Oil	Oil, Gas & Chemicals	Density at 15°C	ASTM D4052-18
Fuel Oil	Oil, Gas & Chemicals	Flash Point PMcc	ASTM D93-20
Fuel Oil	Oil, Gas & Chemicals	Heat of Combustion	ASTM D240-19
Fuel Oil	Oil, Gas & Chemicals	Kinematic viscosity	ASTM D445-19
Fuel Oil	Oil, Gas & Chemicals	Pour Point	ASTM D97-17
Fuel Oil	Oil, Gas & Chemicals	Sediments by extraction	ASTM D473-17
Fuel Oil	Oil, Gas & Chemicals	Total Sulphur Content	ASTM D5453-19
Fuel Oil	Oil, Gas & Chemicals	Sodium	IP 501/05
Fuel Oil	Oil, Gas & Chemicals	Calcium	IP 501/05
Fuel Oil	Oil, Gas & Chemicals	Phosphorous	IP 501/05

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Fuel Oil	Oil, Gas & Chemicals	Vanadium	IP 501/05
Fuel Oil	Oil, Gas & Chemicals	Aluminum	IP 501/05
Fuel Oil	Oil, Gas & Chemicals	Silicon	IP 501/05
Fuel Oil	Oil, Gas & Chemicals	Nickel	IP 501/05
Fuel Oil	Oil, Gas & Chemicals	Iron	IP 501/05
Jet Fuel	Oil, Gas & Chemicals	Thermal Oxidation Stability of Aviation Turbine Fuels (JETOT)	ASTM D3241-20
Jet Fuel	Oil, Gas & Chemicals	MSEP	ASTM D3948-20
Jet Fuel	Oil, Gas & Chemicals	Sulphur content	ASTM D4294-16
Jet Fuel	Oil, Gas & Chemicals	Smoke point	ASTM D1322-19
Jet Fuel	Oil, Gas & Chemicals	Density at 15°C	ASTM D4052-18
Jet Fuel	Oil, Gas & Chemicals	Saybolt color	ASTM D156-15
Jet Fuel	Oil, Gas & Chemicals	Flash Point (Abel Cup)	IP 170-15
Jet Fuel	Oil, Gas & Chemicals	Freezing Point	ASTM D2386-19
Jet Fuel	Oil, Gas & Chemicals	IBP	ASTM D86-20
Jet Fuel	Oil, Gas & Chemicals	10 % Recovery	ASTM D86-20
Jet Fuel	Oil, Gas & Chemicals	50 % Recovery	ASTM D86-20
Jet Fuel	Oil, Gas & Chemicals	90 % Recovery	ASTM D86-20
Jet Fuel	Oil, Gas & Chemicals	95 % Recovery	ASTM D86-20
Jet Fuel	Oil, Gas & Chemicals	FBP	ASTM D86-20
Jet Fuel	Oil, Gas & Chemicals	Aromatics	ASTM D1319-20
Jet Fuel	Oil, Gas & Chemicals	Kin. Viscosity at -20 C	ASTM D445-21

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Jet Fuel	Oil, Gas & Chemicals	Existent Gum	ASTM D381-19
Jet Fuel	Oil, Gas & Chemicals	Mercaptan	ASTM D3227-16
Jet Fuel	Oil, Gas & Chemicals	Specific energy	ASTM D3338-20
LPG	Oil, Gas & Chemicals	Ethane	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Ethylene	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Propane	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Propylene	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Iso-butane	ASTM D2163-19
LPG	Oil, Gas & Chemicals	n-butane	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Trans-2-butene	ASTM D2163-19
LPG	Oil, Gas & Chemicals	1-butene	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Iso-butene	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Cis-2-butene	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Iso-pentane	ASTM D2163-19
LPG	Oil, Gas & Chemicals	n-pentane	ASTM D2163-19
LPG	Oil, Gas & Chemicals	1,3 butadiene	ASTM D2163-19
LPG	Oil, Gas & Chemicals	Hexane	ASTM D2163-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	Methane	GPA 2261-20 / ASTM D1945-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	Ethane	GPA 2261-20 / ASTM D1945-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	Propane	GPA 2261-20 / ASTM D1945-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	Iso-butane	GPA 2261-20 / ASTM D1945-19

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Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	n-butane	GPA 2261-20 / ASTM D1945-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	Iso-pentane	GPA 2261-20 / ASTM D1945-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	n-pentane	GPA 2261-20 / ASTM D1945-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	Hexane	GPA 2261-20 / ASTM D1945-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	Nitrogen	GPA 2261-20 / ASTM D1945-19
Natural Gas / Liquefied Natural Gas	Oil, Gas & Chemicals	Carbon dioxide	GPA 2261-20 / ASTM D1945-19
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Total acid number (TAN)	ASTM D664-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Pour Point	ASTM D97-17
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Kin viscosity at 40 °C	ASTM D445-19
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Kin viscosity at 100 °C	ASTM D445-19
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Viscosity Index	ASTM D2270-16
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Flash point	ASTM D93-20
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Density	ASTM D4052-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Water content	ASTM D6304-16
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Total Base number (TBN)	ASTM D2896-16
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Aluminum	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Chromium	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Cadmium	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Copper	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Iron	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Magnesium	ASTM D5185-18

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Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Manganese	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Molybdenum	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Nickel	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Sodium	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Tin	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Titanium	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Vanadium	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Calcium	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Phosphorous	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Zinc	ASTM D5185-18
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Carbon residue	ASTM D189- 19
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Color	ASTM D1500-17
Engine Oil (Fresh/unused)	Oil, Gas & Chemicals	Flash point COC	ASTM D92-18
Gasoline / Naphtha	Oil, Gas & Chemicals	Density at 15 C	ASTM D4052-18
Gasoline / Naphtha	Oil, Gas & Chemicals	Benzene	ASTM D6277-17
Gasoline / Naphtha	Oil, Gas & Chemicals	Manganese	ASTM D3831-17
Gasoline / Naphtha	Oil, Gas & Chemicals	Lead	ASTM D3237-17
Gasoline / Naphtha	Oil, Gas & Chemicals	Aromatics	ASTM D1319-20
Gasoline / Naphtha	Oil, Gas & Chemicals	Olefins	ASTM D1319-20
Gasoline / Naphtha	Oil, Gas & Chemicals	Saturates	ASTM D1319-20
Gasoline / Naphtha	Oil, Gas & Chemicals	Sulfur	ASTM D-5453-19

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Gasoline / Naphtha	Oil, Gas & Chemicals	Ether/Oxygenates	ASTM D4815-19
Gasoline / Naphtha	Oil, Gas & Chemicals	Existent Gum	ASTM D381-19
Gasoline / Naphtha	Oil, Gas & Chemicals	Mercaptan	ASTM D3227-19
Crude/Condensate	Oil, Gas & Chemicals	Density at 15 C / Relative Density /API	ASTM D4052-18
Crude/Condensate	Oil, Gas & Chemicals	Salt Content	ASTM D3230-19
Crude/Condensate	Oil, Gas & Chemicals	Water	ASTM D4928-18
Crude/Condensate	Oil, Gas & Chemicals	Sediment	ASTM D473-17

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